IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

In re Patent Application of

LINGLE et al. Atty. Ref.: 3691-583

Serial No. 10/645,836 TC/A.U.: 1755

Filed: August 22, 2003 Examiner: G. BLACKWELL

For: COATED ARTICLE WITH SILICON NITRIDE INCLUSIVE LAYER ADJACENT GLASS

* *

July 24, 2006

Mail Stop Appeal Brief - Patents
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

APPEAL BRIEF

Sir:

Applicant hereby appeals to the Board of Patent Appeals and Interferences from the last decision of the Examiner.

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(I) REAL PARTY IN INTEREST

The real party in interest is Guardian Industries Corp., a corporation of the country of the United States of America.

(II) RELATED APPEALS AND INTERFERENCES

The appellant, the undersigned, and the assignee are not aware of any related appeals, interferences, or judicial proceedings (past or present), which will directly affect or be directly affected by or have a bearing on the Board's decision in this appeal.

(III) STATUS OF CLAIMS

Claims 1, 3-23, 28-39 and 43-44 are pending and have been rejected. No claims have been substantively allowed.

However, it is noted that the Section 102/103 rejections of claims 1, 3-5, 10-14, 17 and 22 based on Rondeau have been *withdrawn*, as indicated in the Notice of Panel Decision from Pre-Appeal Brief Review dated May 23, 2006.

(IV) STATUS OF AMENDMENTS

No amendments have been filed since the date of the Final Rejection.

(V) SUMMARY OF CLAIMED SUBJECT MATTER

This section is for purposes of example only and is not limiting as to the claims.

The invention of claim 1 relates to coated article including a multi-layer coating supported by a glass substrate. Such coated articles may be used in windows such as in the context of architectural windows, insulating glass (IG) window units, automotive windows such as windshields, and so forth (e.g., see paragraph [0002]). In claim 1, the multi-layer coating comprises, from the glass substrate outwardly, a layer comprising silicon nitride (e.g., see layer 4 in Fig. 1) located directly on and contacting the glass substrate (e.g., see substrate 1 in Fig. 1); a layer comprising zinc oxide (e.g., see layer 7 in Fig. 1) located directly on and contacting the layer comprising silicon nitride (e.g., see layer 4 in Fig. 1); a layer comprising silver (e.g., see layer 9 in Fig. 1) located over and contacting the layer comprising zinc oxide (e.g., see layer 7 in Fig. 1); a dielectric layer comprising a metal oxide (e.g., see layer 13, 14 and/or 17 in Fig. 1); another layer comprising silver (e.g., see layer 19 in Fig. 1); and another dielectric layer (e.g., see layer 23 and/or 25 in Fig. 1).

Claim 1 further requires that the coated article is heat treated (e.g., thermally tempered or heat bent, see paragraph [0058]), and has a ratio T_{vis}/R_s of at least 25 after heat treatment (where T_{vis} is visible transmission (%) and R_s is sheet resistance of the coating in units of ohms/square) and a ΔE^* value (glass side reflective and/or transmissive) of less than or equal to about 8 due to the heat treatment. E.g., see paragraphs [0013] and [0025]. The definition of ΔE^* is provided in paragraphs [0047] through [0048]. Low ΔE^* values are advantageous in that this means that the coated articles does not change too much with respect to color appearance due to heat treatment,

and a high ratio T_{vis}/R_s is advantageous in that this permits a combination of both high visible transmission and good solar performance to be achieved which has heretofore been difficult at best (e.g., see paragraphs [0007] through [0009]).

Claim 3 requires that the coated article has a ratio T_{vis}/R_s of at least 30 after heat treatment. E.g., see paragraphs [0013] and [0025]. Claim 4 requires that the coated article has a ratio T_{vis}/R_s of at least 32 after heat treatment. E.g., see paragraphs [0013] and [0025]. Claim 5 requires that the coated article has a ratio T_{vis}/R_s of at least 34 after heat treatment. E.g., see paragraphs [0013] and [0025].

Claim 6 requires that the layer comprising silicon nitride is Si-rich and has an index of refraction "n" of at least 2.10. (e.g., see paragraph [0031]); and claim 8 requires that the layer comprising silicon nitride is oxided so as to *form silicon oxynitride* and has an *index of refraction "n" of from 1.85 to 2.0* (e.g., see paragraph [0029]).

Claim 11 requires that the coated article is heat treated and has a ΔE^* value (glass side reflective and/or transmissive) of less than or equal to about 5 due to the heat treatment. E.g., see paragraphs [0013] and [0025]. The definition of ΔE^* is provided in paragraphs [0047] through [0048]. Low ΔE^* values are advantageous in that this means that the coated articles does not change too much with respect to color appearance due to heat treatment. Claim 12 requires that the coated article is heat treated and has a ΔE^* value (glass side reflective and/or transmissive) of less than or equal to about 4 due to the heat treatment, claim 13 less than or equal to about 3, and claim 14 less than or equal to about 2.5. E.g., see paragraphs [0013] and [0025].

Claim 23 requires the coated article is heat treated and has a ratio T_{vis}/R_s of at least 34 after heat treatment and a ΔE^* value of less than or equal to about 8 due to the heat

treatment. E.g., see paragraphs [0013] and [0025]. The definition of ΔE^* is provided in paragraphs [0047] through [0048]. Low ΔE^* values are advantageous in that this means that the coated articles does not change too much with respect to color appearance due to heat treatment, and a high ratio T_{vis}/R_s is advantageous in that this permits a combination of both high visible transmission and good solar performance to be achieved which has heretofore been difficult at best (e.g., see paragraphs [0007] through [0009]).

Claim 39 requires the coated article is heat treated and has a ratio T_{vis}/R_s of at least 32 after heat treatment and a ΔE^* value of less than or equal to about 8 due to the heat treatment. E.g., see paragraphs [0013] and [0025]. The definition of ΔE^* is provided in paragraphs [0047] through [0048]. Low ΔE^* values are advantageous in that this means that the coated articles does not change too much with respect to color appearance due to heat treatment, and a high ratio T_{vis}/R_s is advantageous in that this permits a combination of both high visible transmission and good solar performance to be achieved which has heretofore been difficult at best (e.g., see paragraphs [0007] through [0009]).

(VI) GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

1. Whether claims 1, 3-5, 9-14, 22-23, 31-33, 38-39 and 44 are anticipated by Krisko (US 6,060,178) under 35 U.S.C. Section 102(b).

2. Whether claims 1, 3-5, 8, 10-14, 16-17, 19-23, 30, 32-33, 35-37, 39 and 44 are anticipated by Ebisawa (US 6,472,072) under 35 U.S.C. Section 102(e).

3. Whether claims 23, 32-33, 35, 38-39 and 44 are unpatentable over Rondeau (US 6,355,334) under 35 U.S.C. Section 102/103.

4. Whether claims 1, 6-7, 15-16, 18, 23, 28-29, 34, 39 and 43 are unpatentable over Laird (US 2003/0150711) in view of Hartig (US 2002/0102352) under 35 U.S.C. Section 103(a).

(VII) ARGUMENT

It is axiomatic that in order for a reference to anticipate a claim, it must disclose, teach or suggest each and every feature recited in the claim. See, e.g., Kalman v. Kimberly-Clark Corp., 713 F.2d 760, 218 USPQ 781 (Fed. Cir. 1983). The USPTO has the burden in this respect.

Moreover, the USPTO has the burden under 35 U.S.C. Section 103 of establishing a *prima facie* case of obviousness. In re Piasecki, 745, F.2d 1468, 1471-72, 223 USPQ 785, 787-88 (Fed. Cir. 1984). It can satisfy this burden only by showing that some objective teaching in the prior art, or that knowledge generally available to one of ordinary skill in the art, would have led that individual to combine the relevant teachings of the references to arrive at the claimed invention. In re Fine, 837 F.2d 1071, 1074, 5 USPQ2d 1596, 1598 (Fed. Cir. 1988). Before the USPTO may combine the disclosures of the references in order to establish a *prima facie* case of obviousness, there must be some suggestion for doing so. In re Jones, 958 F.2d 347 (Fed. Cir. 1992). Even assuming, *arguendo*, that a given combination of references is proper, the combination of references must in any event disclose the features of the claimed invention in order to render it obvious.

Furthermore, with respect to the inherency rejections, the law is clear that for something to be "inherent" in a reference, it must "necessarily" be present. *In re Robertson*, 169 F.3d 743, 745, 49 USPQ2d 1949, 1950-51 (Fed. Cir. 1999). The fact that a certain result or characteristic "may" occur or be present in the prior art is not sufficient to establish the inherence of that result of characteristic. *In re Rijckaert*, 9 F.3d 1531, 1534, 28 USPQ2d 1955, 1957 (Fed. Cir. 1993). The Board of Appeals has made clear

that "[i]n relying upon the theory of inherency, the examiner must provide a basis in fact and/or technical reasoning to reasonably support the determination that the allegedly inherent characteristic necessarily flows from the teachings of the applied prior art." *Ex parte Levy*, 17 USPQ2d 1461, 1464 (Bd. Pat. App. & Inter. 1990) (emphasis in original).

Claim 1

Claim 1 stands rejected under 35 U.S.C. Section 102(b) as being allegedly anticipated by Krisko (US 6,060,178). This Section 102(b) rejection is respectfully traversed for at least the following reasons.

Claim 1 requires that "the coated article is heat treated [e.g., thermally tempered, heat strengthened or heat bent] and has *a ratio T_{vis}/R_s of at least 25 after heat treatment (where T_{vis} is visible transmission (%) and R_s is sheet resistance of the coating in units of ohms/square) and a ΔE^* value (glass side reflective and/or transmissive) of less than or equal to about 8 due to the heat treatment.*" Krisko fails to disclose or suggest these features of claim 1.

Krisko fails to disclose or suggest the coating of claim 1, having *a ratio T_{vis}/R_s of at least 25 after heat treatment and a ΔE^* value of less than or equal to about 8 due to the heat treatment.* Krisko does not expressly state what the T_{vis}/R_s and ΔE^* values are for Example 2 which is relied on by the Examiner in the final rejection. However, viewing Krisko as a whole evidences that values of Krisko's Example 2 do *not* fall within the ranges of claim 1. Example 1 of Krisko has a T_{vis}/R_s of 17.8 after heat treatment, which is *well less than that required by claim 1*. Because Example 2 of Krisko has a *lower* visible transmission (T_{vis}) after heat treatment than does Example 1 of Krisko (82% in Example 2 vs. 89% in Example 1), this factor would suggest that the T_{vis}/R_s value of

Example 2 relied on in the final rejection would be even *lower* than the 17.8 value of Example 1 and thus be even further outside of the range called for in claim 1. Accordingly, it is respectfully submitted that the evidence of record shows that Krisko's Example 2 does not fall within the ranges of claim 1. Krisko fails to disclose or suggest each of (a) a ratio T_{vis}/R_s of at least 25 after heat treatment, and (b) a ΔE^* value after heat treatment of less than or equal to about 8 due to the heat treatment, as required by claim 1, and cannot possibly anticipate the claim.

Furthermore, the law is clear that for something to be "inherent" in a reference, it must "necessarily" be present. *In re Robertson*, 169 F.3d 743, 745, 49 USPQ2d 1949, 1950-51 (Fed. Cir. 1999). The fact that a certain result or characteristic "may" occur or be present in the prior art is not sufficient to establish the inherence of that result of characteristic. *In re Rijckaert*, 9 F.3d 1531, 1534, 28 USPQ2d 1955, 1957 (Fed. Cir. 1993). In this case, there is nothing in Example 2 of Krisko which discloses or suggests any of the values T_{vis}/R_s and ΔE^* recited in claim 1. Moreover, Example 1 of the same Krisko reference suggests that these values are not present in Example 2. Thus, it is respectfully submitted that there is no reasonable basis for an "inherency" rejection of claim 1. The Board of Appeals has made clear that "[i]n relying upon the theory of inherency, the examiner must provide a basis in fact and/or technical reasoning to reasonably support the determination that the allegedly inherent characteristic necessarily flows from the teachings of the applied prior art." *Ex parte Levy*, 17 USPQ2d 1461, 1464 (Bd. Pat. App. & Inter. 1990) (emphasis in original). Such a showing cannot be made in this case given that the cited art (e.g., Krisko's Example 1) actual suggests to the contrary. It is clear that claim 1 *structural* features (a) a ratio T_{vis}/R_s of at least 25 after

heat treatment, and (b) a ΔE^* value after heat treatment of less than or equal to about 8 due to the heat treatment, are not necessarily present in Krisko (instead, the art indicates that Krisko does not meet these features of the claim as discussed above).

Claim 1 also stands rejected under 35 U.S.C. Section 102(e) as being allegedly anticipated by Ebisawa (US 6,472,072). However, Ebisawa also fails to disclose or suggest *a ratio T_{vis}/R_s of at least 25 after heat treatment and a ΔE^* value of less than or equal to about 8 due to the heat treatment* as required by claim 1. Ebisawa at col. 7, lines 40-50, for example, has drastic swings in a* and b* color values in Example 1 (relied on by the Examiner) due to heat treatment thereby suggesting a ΔE^* value well above the range called for in claim 1. While Example 1 of Ebisawa does not have sufficient information to calculate T_{vis}/R_s, this value in Example 3 of Ebisawa (TL/TS, using values at col. 10, lines 10-17 after heat treatment) is 13.06 which is *well outside* of the range called for in claim 1. Example 4 of Ebisawa had a T_{vis}/R_s of 12.59, again well outside of the range called for in claim 1. Again, the fact that the Examples of Ebisawa which had enough information to calculate T_{vis}/R_s all had such values well outside of the range called for in claim 1 evidences that these values are also not met by Example 1 which is silent in this regard and relied on by the Examiner. It is clear that claim 1 structural features (a) a ratio T_{vis}/R_s of at least 25 after heat treatment, and (b) a ΔE^* value after heat treatment of less than or equal to about 8 due to the heat treatment, are not necessarily present in Ebisawa (instead, the art indicates that Ebisawa does not meet these features of the claim as discussed above).

Claim 1 also stands rejected under Section 103(a) as being allegedly unpatentable over Laird in view of Hartig. Laird and Hartig, either taken alone or in combination, also

fail to disclose or suggest *a ratio T_{vis}/R_s of at least 25 after heat treatment and a ΔE^* value of less than or equal to about 8 due to the heat treatment* as required by claim 1. Laird's coated article is designed to be non-heat treated, and is entirely unrelated to the invention of claim 1. Laird gives no T_{vis} or R_s or a* or b* or L* values following heat treatment (because Laird is directly toward a non-heat-treated product) so that the reference cannot possibly disclose or suggest the claimed T_{vis}/R_s and ΔE^* values of claim 1. Hartig also fails to provide any such information. Hindsight is not permissible. Citation to Hartig cannot cure the aforesaid flaws of Laird (moreover, Hartig's coating is unrelated to that of claim 1). There is simply no disclosure or suggestion in either Laird or Hartig of claim 1 features (a) a ratio T_{vis}/R_s of at least 25 after heat treatment, and (b) a ΔE^* value after heat treatment of less than or equal to about 8 due to the heat treatment. Instead, the fact that Laird is directed toward a non-heat-treated coating evidences that Laird actually teaches directly away from these features of claim 1.

On page 3 of the final rejection, the Examiner alleges that "when the structure recited in the reference is substantially identical to that of the claims, the claimed properties or function are presumed inherent." If this were true, the claim 1 would be entitled to the filing date of parent case 10/400,080 (filed March 27, 2003), and Laird would not be prior art and could not be used in a Section 103(a) rejection (note that parent case 10/400,080 has all the layers recited in claim 1, and the bottom titanium based layer is said to be "optional" in 10/400,080). Laird is commonly owned with the instant application and was commonly owned at the time of the invention, and thus could not be used in a Section 103 rejection if claim 1 is entitled to a filing date of March 27, 2003 as the Examiner contends. Thus, if the aforesaid statement of the Examiner is to be

taken as true and relied on by the USPTO in any way, then all Section 103(a) rejections based on Laird should be withdrawn or reversed due to 35 U.S.C. Section 103(c).

Claim 3

Claim 3 requires that "the coated article has a ratio T_{vis}/R_s *of at least 30 after heat treatment*." Each of Krisko, Ebisawa, Laird and Hartig fail to disclose or suggest this feature of claim 3. This feature is not inherent in any of the cited references. Instead, the references indicate that this feature is not met by the aforesaid references as discussed above.

Claim 4

Claim 4 requires that "the coated article has a ratio T_{vis}/R_s *of at least 32 after heat treatment*." Each of Krisko, Ebisawa, Laird and Hartig fail to disclose or suggest this feature of claim 4. This feature is not inherent in any of the cited references. Instead, the references indicate that this feature is not met by the aforesaid references as discussed above.

Claim 5

Claim 5 requires that "the coated article has a ratio T_{vis}/R_s *of at least 34 after heat treatment*." Each of Krisko, Ebisawa, Laird and Hartig fail to disclose or suggest this feature of claim 5. This feature is not inherent in any of the cited references. Instead, the references indicate that this feature is not met by the aforesaid references as discussed above.

Claim 6

Claim 6 requires that "the layer comprising silicon nitride is Si-rich and has an index of refraction "n" of at least 2.10."

The *only* ground of rejection for claim 6 is based on Laird under 35 U.S.C. Section 103(a). On pages 3, 5, 6, 7, 9, 10, 13, 15, and 16 of the final rejection, the Examiner alleges that "when the structure recited in the reference is substantially identical to that of the claims, the claimed properties or function are presumed inherent." [Note: the Examiner also refers to this on page 18 of the final rejection.] If this were true, the claim 6 would be entitled to the filing date of parent case 10/400,080 (filed March 27, 2003), and Laird would not be prior art and could not be used in a Section 103(a) rejection (note that parent case 10/400,080 has all the layers recited in claim 6, and the bottom titanium based layer is said to be "optional" in 10/400,080). Laird is commonly owned with the instant application and was commonly owned at the time of the invention, and thus could not be used in a Section 103 rejection if claim 6 is entitled to a filing date of March 27, 2003 as the Examiner contends. Thus, if the aforesaid statement of the Examiner is to be taken as true and relied on by the USPTO in any way, then the Section 103(a) rejection of claim 6 based on Laird should be withdrawn or reversed due to 35 U.S.C. Section 103(c); and since this is the only rejection of claim 6 the claim should be in condition for allowance.

Claim 8

Claim 8 requires that the "layer comprising silicon nitride is oxided so as to *form silicon oxynitride* and has an *index of refraction "n" of from 1.85 to 2.0*." Ebisawa, the only reference cited against claim 8, fails to disclose or suggest such an index value after heat treatment. Moreover, this index value is not inherent in Ebisawa. There is nothing in Ebisawa which discloses or suggests such an index value. The Section 103(a) rejection of claim 8 based on Ebisawa lacks merit.

Claim 11

Claim 11 requires that "the coated article is heat treated and has a *ΔE* value (glass side reflective and/or transmissive) of less than or equal to about 5 due to the heat treatment.*" The cited art fails to disclose or suggest this feature of claim 11. Both Ebisawa and Krisko fail to disclose or suggest this. For example, Ebisawa at col. 7, lines 40-50, for example, has drastic swings in a* and b* color values in Example 1 due to heat treatment thereby suggesting a ΔE* value well above the range called for in claim 11. This feature is simply not disclosed or suggested in the art cited against this claim.

Claim 12

Claim 12 requires that "the coated article is heat treated and has a *ΔE* value (glass side reflective and/or transmissive) of less than or equal to about 4 due to the heat treatment.*" The cited art fails to disclose or suggest this feature of claim 12. Both Ebisawa and Krisko fail to disclose or suggest this. For example, Ebisawa at col. 7, lines 40-50, for example, has drastic swings in a* and b* color values in Example 1 due to heat treatment thereby suggesting a ΔE* value well above the range called for in claim 12. This feature is simply not disclosed or suggested in the art cited against this claim.

Claim 13

Claim 13 requires that "the coated article is heat treated and has a *ΔE* value (glass side reflective and/or transmissive) of less than or equal to about 3 due to the heat treatment.*" The cited art fails to disclose or suggest this feature of claim 13. Both Ebisawa and Krisko fail to disclose or suggest this. For example, Ebisawa at col. 7, lines 40-50, for example, has drastic swings in a* and b* color values in Example 1 due to heat

treatment thereby suggesting a ΔE* value well above the range called for in claim 13. This feature is simply not disclosed or suggested in the art cited against this claim.

Claim 14

Claim 14 requires that "the coated article is heat treated and has a *ΔE* value (glass side reflective and/or transmissive) of less than or equal to about 2.5 due to the heat treatment.*" The cited art fails to disclose or suggest this feature of claim 14. Both Ebisawa and Krisko fail to disclose or suggest this. For example, Ebisawa at col. 7, lines 40-50, for example, has drastic swings in a* and b* color values in Example 1 due to heat treatment thereby suggesting a ΔE* value well above the range called for in claim 14. This feature is simply not disclosed or suggested in the art cited against this claim.

Claim 18

The *only* ground of rejection for claim 18 is based on Laird under 35 U.S.C. Section 103(a). On pages 3, 5, 6, 7, 9, 10, 13, 15, and 16 of the final rejection, the Examiner alleges that "when the structure recited in the reference is substantially identical to that of the claims, the claimed properties or function are presumed inherent." If this were true, the claim 18 would be entitled to the filing date of parent case 10/400,080 (filed March 27, 2003), and Laird would not be prior art and could not be used in a Section 103(a) rejection (note that parent case 10/400,080 has all the layers recited in claim 18, and the bottom titanium based layer is said to be "optional" in 10/400,080). Laird is commonly owned with the instant application and was commonly owned at the time of the invention, and thus could not be used in a Section 103 rejection if claim 18 is entitled to a filing date of March 27, 2003 as the Examiner contends. Thus, if the aforesaid statement of the Examiner is to be taken as true and relied on by the

USPTO in any way, then the Section 103(a) rejection of claim 18 based on Laird should be withdrawn or reversed due to 35 U.S.C. Section 103(c); and since this is the only rejection of claim 18 the claim should be in condition for allowance.

Claim 23

Claim 23 requires the coated article is heat treated and has a *ratio T_{vis}/R_s of at least 34 after heat treatment* and a *ΔE^* value of less than or equal to about 8* due to the heat treatment. Again, each of Krisko, Ebisawa, Rondeau and Laird fail to disclose or suggest these features of claim 23. Krisko, Ebisawa and Laird fails to disclose or suggest these features of claim 23, for the reasons discussed above with respect to claims 1 and 5. Citation to Hartig cannot cure the fundamental flaws of Laird in this regard.

Moreover, Rondeau gives no T_{vis} or R_s or a* or b* or L* values following heat treatment, so that the reference cannot possibly disclose or suggest the claimed T_{vis}/R_s and ΔE^* values of claim 23. Again, these features are clearly not inherent in Rondeau, Kriso, Ebisawa, Laird of Hartig.

Claim 28

The *only* ground of rejection for claim 28 is based on Laird under 35 U.S.C. Section 103(a). On pages 3, 5, 6, 7, 9, 10, 13. 15, and 16 of the final rejection, the Examiner alleges that "when the structure recited in the reference is substantially identical to that of the claims, the claimed properties or function are presumed inherent." If this were true, the claim 28 would be entitled to the filing date of parent case 10/400,080 (filed March 27, 2003), and Laird would not be prior art and could not be used in a Section 103(a) rejection (note that parent case 10/400,080 has all the layers recited in claim 28, and the bottom titanium based layer is said to be "optional" in

10/400,080). Laird is commonly owned with the instant application and was commonly owned at the time of the invention, and thus could not be used in a Section 103 rejection if claim 28 is entitled to a filing date of March 27, 2003 as the Examiner contends. Thus, if the aforesaid statement of the Examiner is to be taken as true and relied on by the USPTO in any way, then the Section 103(a) rejection of claim 28 based on Laird should be withdrawn or reversed due to 35 U.S.C. Section 103(c); and since this is the only rejection of claim 28 the claim should be in condition for allowance.

Claim 30

Claim 30 requires that the "layer comprising silicon nitride is oxided so as to *form silicon oxynitride* and has an *index of refraction "n" of from 1.85 to 2.0*." Ebisawa, the only reference cited against claim 30, fails to disclose or suggest such an index value after heat treatment. Moreover, this index value is not inherent in Ebisawa. There is nothing in Ebisawa which discloses or suggests such an index value. The Section 103(a) rejection of claim 30 based on Ebisawa lacks merit.

Claim 33

Claim 33 requires that "the coated article is heat treated and has a ΔE^* value (glass side reflective and/or transmissive) of less than or equal to about 5 due to the heat treatment." The cited art fails to disclose or suggest this feature of claim 33. Both Ebisawa and Krisko fail to disclose or suggest this. For example, Ebisawa at col. 7, lines 40-50, for example, has drastic swings in a* and b* color values in Example 1 due to heat treatment thereby suggesting a ΔE^* value well above the range called for in claim 33. This feature is simply not disclosed or suggested in the art cited against this claim.

Claim 39

Claim 39 requires the coated article is heat treated and has a *ratio T_{vis}/R_s of at least 32 after heat treatment* and a *ΔE^* value of less than or equal to about 8* due to the heat treatment. Again, each of Krisko, Ebisawa, Rondeau and Laird fail to disclose or suggest this requirement of claim 39. Citation to Hartig cannot cure the fundamental flaws of Laird in this regard.

CONCLUSION

In conclusion it is believed that the application is in clear condition for allowance; therefore, early reversal of the Final Rejection and passage of the subject application to issue are earnestly solicited.

Respectfully submitted,

NIXON & VANDERHYE P.C.

By: _____
Joseph A. Rhoa
Reg. No. 37,515

JAR:caj
901 North Glebe Road, 11th Floor
Arlington, VA 22203-1808
Telephone: (703) 816-4000
Facsimile: (703) 816-4100

(VIII) CLAIMS APPENDIX

1. A coated article including a multi-layer coating supported by a glass substrate, the multi-layer coating comprising, from the glass substrate outwardly:

a layer comprising silicon nitride located directly on and contacting the glass substrate;

a layer comprising zinc oxide located directly on and contacting the layer comprising silicon nitride;

a layer comprising silver located over and contacting the layer comprising zinc oxide;

a dielectric layer comprising a metal oxide;

another layer comprising silver;

another dielectric layer; and

wherein the coated article is heat treated and has a ratio T_{vis}/R_s of at least 25 after heat treatment (where T_{vis} is visible transmission (%) and R_s is sheet resistance of the coating in units of ohms/square) and a ΔE^* value (glass side reflective and/or transmissive) of less than or equal to about 8 due to the heat treatment.

2. (Canceled)

3. The coated article of claim 1, wherein the coated article has a ratio T_{vis}/R_s of at least 30 after heat treatment.

4. The coated article of claim 1, wherein the coated article has a ratio T_{vis}/R_s of at least 32 after heat treatment.

5. The coated article of claim 1, wherein the coated article has a ratio T_{vis}/R_s of at least 34 after heat treatment.

6. The coated article of claim 1, wherein the layer comprising silicon nitride is Si-rich and has an index of refraction "n" of at least 2.10.

7. The coated article of claim 1, wherein the layer comprising silicon nitride is Si-rich and has an index of refraction "n" of from 2.15 to 2.25.

8. The coated article of claim 1, wherein the coated article comprises a laminated vehicle windshield, and the layer comprising silicon nitride is oxided so as to form silicon oxynitride and has an index of refraction "n" of from 1.85 to 2.0.

9. The coated article of claim 1, wherein the layer comprising silicon nitride has a thickness of from 100 to 200 Å.

10. The coated article of claim 1, wherein the coated article has a sheet resistance (R_s) of less than or equal to 4.0.

11. The coated article of claim 1, wherein the coated article is heat treated and has a ΔE^* value (glass side reflective and/or transmissive) of less than or equal to about 5 due to the heat treatment.

12. The coated article of claim 11, wherein the coated article has a ΔE^* value (glass side reflective and/or transmissive) of less than or equal to about 4 due to the heat treatment.

13. The coated article of claim 11, wherein the coated article has a ΔE^* value (glass side reflective and/or transmissive) of less than or equal to about 3 due to the heat treatment.

14. The coated article of claim 11, wherein the coated article has a ΔE^* value (glass side reflective and/or transmissive) of less than or equal to about 2.5 due to the heat treatment.

15. The coated article of claim 1, wherein said layer comprising silicon nitride is Si-rich and comprises Si_xN_y, where x/y is from 0.8 to 1.0.

16. The coated article of claim 1, wherein the coated article is a laminated vehicle windshield and is heat treated.

17. The coated article of claim 1, wherein at least one of the layer comprising silicon nitride and the layer comprising zinc oxide further includes aluminum or other metal(s).

18. The coated article of claim 1, wherein the coated article includes the following layers from the glass substrate outwardly:

the layer comprising silicon nitride contacting the glass substrate;

the layer comprising zinc oxide located directly on and contacting the layer comprising silicon nitride;

the layer comprising silver located over and contacting the layer comprising zinc oxide;

a layer comprising at least one metal oxide;

a dielectric layer which comprises tin oxide;

a dielectric layer comprising silicon nitride;

a layer comprising zinc oxide;

another layer comprising silver;

a dielectric layer comprising a metal oxide; and

another dielectric layer comprising silicon nitride.

19. The coated article according to claim 1, wherein the coated article comprises a laminated vehicle windshield and has a transmissive haze value of no greater than 0.4.

20. The coated article according to claim 1, wherein the coated article comprises a laminated vehicle windshield and has a transmissive haze value of no greater than 0.35, and a total solar (TS) value of no greater than 46.

21. The coated article according to claim 1, wherein the coated article is a laminated vehicle windshield and has a total solar (TS) value of no greater than 44.

22. The coated article of claim 1, characterized in that when the coated article is exposed to about 650 degrees C of heat treatment for 12 minutes the coated article retains at least 98% of its pre-heat-treatment visible transmission.

23. A heat treated coated article including a multi-layer coating supported by a glass substrate, the multi-layer coating comprising, from the glass substrate outwardly:

a layer comprising silicon nitride located directly on and contacting the glass substrate;

a layer comprising zinc oxide;

a layer comprising silver located over and contacting the layer comprising zinc oxide; and

at least one dielectric layer; and

wherein the coated article is heat treated and has a ratio T_{vis}/R_s of at least 34 after heat treatment (where T_{vis} is visible transmission (%) and R_s is sheet resistance of the coating in units of ohms/square) and a ΔE^* value (glass side reflective and/or transmissive) of less than or equal to about 8 due to the heat treatment.

24-27. (Canceled)

28. The coated article of claim 23, wherein the layer comprising silicon nitride is Si-rich and has an index of refraction "n" of at least 2.10.

29. The coated article of claim 23, wherein the layer comprising silicon nitride is Si-rich and has an index of refraction "n" of from 2.15 to 2.25.

30. The coated article of claim 23, wherein the coated article comprises a laminated vehicle windshield and has been heat treated, and the layer comprising silicon nitride is oxided so as to form silicon oxynitride and has an index of refraction "n" of from 1.85 to 2.0, and wherein the silicon oxynitride may or may not be Si-rich with respect to nitrogen.

31. The coated article of claim 23, wherein the layer comprising silicon nitride has a thickness of from 100 to 200 Å.

32. The coated article of claim 23, wherein the coated article has a sheet resistance (R_s) of less than or equal to 4.0.

33. The coated article of claim 23, wherein the coated article is heat treated and has a ΔE^* value (glass side reflective and/or transmissive) of less than or equal to about 5 due to the heat treatment.

34. The coated article of claim 23, wherein said layer comprising silicon nitride is Si-rich and comprises Si_xN_y, where x/y is from 0.8 to 1.0, and may optionally be partially oxided.

35. The coated article of claim 23, wherein at least one of the layer comprising silicon nitride and the layer comprising zinc oxide further includes aluminum or other metal(s).

36. The coated article according to claim 23, wherein the coated article comprises a laminated vehicle windshield and has a transmissive haze value of no greater than 0.35, and a total solar (TS) value of no greater than 46.

37. The coated article according to claim 23, wherein the coated article is a laminated vehicle windshield and has a total solar (TS) value of no greater than 44.

38. The coated article of claim 23, characterized in that when the coated article is exposed to about 650 degrees C of heat treatment for 12 minutes the coated article retains at least 98% of its pre-heat-treatment visible transmission.

39. A heat treatable coated article including a multi-layer coating supported by a glass substrate, the multi-layer coating comprising, from the glass substrate outwardly:

a layer comprising silicon nitride located directly on and contacting the glass substrate;

a layer comprising at least one metal oxide;

a layer comprising silver located over and contacting the layer comprising the at least one metal oxide;

at least one dielectric layer;

when the coated article is exposed to about 650 degrees C of heat treatment for 12 minutes as a reference, the coated article retains at least 98% of its pre-heat-treatment visible transmission; and

wherein the coated article has a ratio T_{vis}/R_s of at least 32 after the heat treatment (where T_{vis} is visible transmission (%) and R_s is sheet resistance of the coating in units of ohms/square) and a ΔE^* value (glass side reflective and/or transmissive) of less than or equal to about 8 due to the heat treatment.

40-42. (Canceled)

43. The coated article of claim 39, wherein the layer comprising silicon nitride is Si-rich and has an index of refraction "n" of from 2.15 to 2.25.

44. The coated article of claim 39, wherein the coated article is a laminated vehicle windshield or a monolithic window component.

(IX) EVIDENCE APPENDIX

None

(X) RELATED PROCEEDINGS APPENDIX

None